

WHAT IS CLAIMED IS:

1. A method in a wireless communication system for a mobile terminal to transition to a dual mode, in which a packet switched connection and circuit switched connection are used together, from a single mode in which packets are transferred, comprising the steps of:
  - 5 using a packet associated control channel to convey a radio link control or multiple access control message,
  - 10 maintaining packet switched resources, and receiving a dual transfer mode assignment message as a result of using the packet associated channel to convey the radio link control or multiple access control message.
- 15 2. The method of claim 1, wherein the radio link control or multiple access control message is from the mobile terminal to a network in order to request the circuit switched connection, and wherein the dual transfer mode assignment message is from the network to the mobile terminal in order to initiate establishment of the circuit switched connection and allocate resources.
- 20 3. The method of claim 1, wherein the dual transfer mode assignment message is conveyed by the radio link or multiple access control message from a network to the mobile terminal.
- 25 4. The method of claim 1, wherein the dual mode corresponds to a Class-A mode, and the single mode corresponds to a Class-B or Class-C mode.
5. The method of claim 1, wherein the maintaining step precludes idling packet resources.
- 30 6. The method of claim 2, wherein the radio link control or multiple access control message encapsulates at least one radio resource control message, or an additional radio

link control or multiple access control message is introduced for each reply from the network.

7. The method of claim 6, wherein the radio link control or multiple access control message is a packet CS command message.
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8. The method of claim 6, wherein the radio link or multiple access control message is in response to paging by the network.
- 10 9. The method of claim 6, wherein the radio link or multiple access control message includes a packet circuit switch request.
10. The method of claim 6, wherein:
  - the mobile terminal makes a plurality of attempts to send the radio link or
  - multiple access control message,
  - the mobile terminal starts a timer after the plurality of attempts, and
  - if the timer expires then packet resources are released.
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11. The method of claim 6, wherein if the network cannot allocate packet switched resources then packet resources are released.
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12. The method of claim 6, wherein if the network cannot allocate circuit switched resources the mobile terminal continues in packet transfer mode only.
- 25 13. The method of claim 3, wherein the dual transfer mode assignment message or an immediate assignment message includes an indication of being sent instead of a packet paging request message.
14. A computer readable medium encoded with a software data structure sufficient for
- 30 performing the method of claim 1.

15. A mobile terminal for transitioning in a wireless communication system to a dual mode wherein a packet switched connection and circuit switched connection are used together, from a single mode wherein packets are transferred, comprising:
  - a transceiver, for using a packet associated control channel that conveys a radio link control or multiple access control message; and
  - a processing unit, for receiving a dual transfer mode assignment message via the transceiver as a result of the radio link or multiple access control message, wherein the mobile terminal is arranged to maintain the packet switched connection while the radio link or multiple access control message is conveyed and the dual transfer mode assignment message is received.
16. The mobile terminal of claim 15, further comprising:
  - a packet switch device, for processing and passing an uninterrupted data signal between the processing unit and the transceiver; and
  - a circuit switch device, for processing and passing a voice signal between the processing unit and the transceiver, the voice signal being initiated after the dual transfer mode assignment message is received.
17. The mobile terminal of claim 15, wherein the radio link or multiple access control message is transmitted by the transceiver, in order to request the circuit switched connection.
18. The mobile terminal of claim 15, wherein the dual transfer mode assignment message is conveyed by the radio link or multiple access control message which is received by the transceiver, in order to initiate establishment of the circuit switched connection and allocate resources
19. The mobile terminal of claim 15, wherein the dual mode corresponds to a Class-A mode, and the single mode corresponds to a Class-B or Class-C mode.

20. The mobile terminal of claim 15, wherein maintaining the packet switched connection precludes idling packet resources.
21. The mobile terminal of claim 17, wherein the radio link control or multiple access control message encapsulates at least one radio resource control message, or an additional radio link control or multiple access control message is introduced for each reply from the network.
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22. The mobile terminal of claim 21, wherein the radio link control or multiple access control message is a packet CS command message.
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23. The mobile terminal of claim 21, wherein the radio link or multiple access control message is in response to paging received by the transceiver.
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24. The mobile terminal of claim 21, wherein the radio link or multiple access control message includes a packet circuit switch request.
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25. The mobile terminal of claim 21, wherein:
  - the mobile terminal makes a plurality of attempts to send the radio link or multiple access control message,
  - the mobile terminal starts a timer after the plurality of attempts, and
  - if the timer expires then packet resources are released by the mobile terminal.
26. The mobile terminal of claim 21, wherein the dual transfer mode assignment message is sent instead of a packet paging request.
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27. A system for transitioning in a wireless communication system to a dual mode wherein a packet switched connection and circuit switched connection are used together, from a single mode wherein packets are transferred, comprising:
  - 30
  - a mobile terminal, for processing a radio link control or multiple access control message that is conveyed by a packet associated control channel; and

a base station, for providing to the mobile terminal a dual transfer mode assignment message, as a result of using the packet associated channel to convey the radio link or multiple access control message,

wherein the base station is also for providing to the mobile terminal  
5 uninterrupted packet switched resources.

28. The system of claim 27, wherein the radio link or multiple access control message is from the mobile terminal to the base station.

10 29. The system of claim 27, wherein the dual transfer mode assignment message is conveyed by the radio link or multiple access control message from the base station to the mobile terminal.

15 30. The system of claim 27, wherein the dual mode corresponds to a Class-A mode, and the single mode corresponds to a Class-B or Class-C mode.